

4240-138

**Section I (Amendments to the Claims)**

Please amend claims 1 and 18, cancel claims 3, 4, 21 and 22, and add new claims 23-28, as set out in the following listing of claims of the application.

1. (Currently amended) A non-activated tissue-regeneration polypeptide (TRP) containing:
  - (a) a protein transduction domain (PTD) ~~making the polypeptides to permeate cell membranes without cell membrane receptors;~~
  - (b) a furin activation domain (FAD) which has at least one proprotein convertase cleavage site and is cleaved by the proprotein convertase ~~to activate tissue regeneration domain (TRD)~~ in cells; and
  - (c) a non-activated tissue regeneration domain (TRD) ~~(TRD)~~ which is activated by the proprotein convertase cleavage of the FAD, and which stimulate the growth or formation of tissues or to induce the regeneration of tissues.
2. (Original) The non-activated TRP according to claim 1, wherein the proprotein convertase is furin.
- 3.-4. (Cancelled)
5. (Original) The non-activated TRP according to claim 1, wherein the TRD to be cleaved by proprotein convertase is selected from the group consisting of BMPs, TGF- $\beta$ ,  $\beta$ -NGF ( $\beta$ -nerve growth factor),  $\beta$ -amyloid, ADAMs (a disintegrin and metalloproteinase-like), TNF-a, MMPs (matrix metalloproteinases), and insulin-like growth factor (IGF-1).
6. (Original) The non-activated TRP according to claim 1, wherein the TRD is an amino acid sequence selected from the group consisting of SEQ ID NOs: 1 to 13.
7. (Original) The non-activated TRP according to claim 1, wherein the FAD is an amino acid sequence selected from the group consisting of SEQ ID NOs: 14 to 26.

4240-138

8. (Original) The non-activated TRP according to claim 1, wherein the PTD is selected from the group consisting of TAT, drosophila melanogaster-derived Antp peptide, VP22 peptide and mph-1-btm.
9. (Original) The non-activated TRP according to claim 1, which is in the form of fusion polypeptide of PTD, FAD and TRD.
10. (Withdrawn) A recombinant vector inserted with an FAD-encoding base sequence in front of the 5' region of TRD-encoding DNA, a PTD base sequence, a base sequence for tagging, and at least four histidine-encoding base sequences for separation and purification.
11. (Withdrawn) A transformed bacteria with the recombinant vector of claim 10.
12. (Withdrawn) A method for preparing non-activated TRP, comprising the steps of:
  - (a) culturing the transformed bacteria of claim 11 to express a [PTD-FAD-TRD] polypeptide; and
  - (b) centrifuging the culture broth, and then removing the two-dimensional or three-dimensional structure of the polypeptide or converting the two-dimensional or three-dimensional structure to one-dimensional linear structure by addition of urea solution into the supernatant and cell pellet, and then purifying the [PTD-FAD-TRD] polypeptide.
13. (Withdrawn) The method for preparing the non-activated TRP according to claim 12, wherein the TRD to be cleaved by proprotein coverase is selected from the group consisting of BMPs, TGF- $\beta$ , - $\beta$ -NGF ( $\beta$ -nerve growth factor),  $\beta$ -amyloid, ADAMs (a disintegrin and metalloproteinase-like), TNF-a, MMPs (matrix metalloproteinases), and insulin-like growth factor (IGF-1).
14. (Withdrawn) The method for preparing non-activated TRP according to claim 12, wherein the TRD is an amino acid sequence selected from the group consisting of SEQ ID NOs: 1 to 13.
15. (Withdrawn) The method for preparing non-activated TRP according to claim 12, wherein the FAD is an amino acid sequence selected from the group consisting of SEQ ID NOs: 14 to 26.

4240-138

16. (Withdrawn) The method for preparing non-activated TRP according to claim 12, wherein the PTD is selected from the group consisting of TAT, drosophila melanogaster-derived Antp peptide, VP22 peptide and mph-1-btm.

17. (Withdrawn) The method for preparing non-activated TRP according to claim 12, wherein the purification step comprises the sub-steps of binding the polypeptide to nickel-titanium beads, washing the beads with the same solution, and then eluting the beads with imidazole and a high-salt buffer solution.

18. (Currently amended) A composition for stimulating the formation or regeneration of tissue, containing the non-activated TRP as an active ingredient of as in claim 1, as an active ingredient.

19. (Original) The composition according to claim 18, wherein the tissue is bone or cartilage.

20. (Original) The composition according to claim 19, which further contains the growth factor selected from the group consisting of TGF-  $\beta$ , IGF, PDGF, and FGF.

21.-22. (Cancelled)

23. (New) A composition for stimulating the formation or regeneration of tissue, containing the non-activated TRP as an active ingredient as in claim 2.

24. (New) A composition for stimulating the formation or regeneration of tissue, containing the non-activated TRP as an active ingredient as in claim 5.

25. (New) A composition for stimulating the formation or regeneration of tissue, containing the non-activated TRP as an active ingredient as in claim 6.

26. (New) A composition for stimulating the formation or regeneration of tissue, containing the non-activated TRP as an active ingredient as in claim 7.

**4240-138**

27. (New) A composition for stimulating the formation or regeneration of tissue, containing the non-activated TRP as an active ingredient as in claim 8.

28. (New) A composition for stimulating the formation or regeneration of tissue, containing the non-activated TRP as an active ingredient as in claim 9.